

REMARKS

The present Amendment is in response to the non-final Office Action mailed September 6, 2005, in the above-identified application. Enclosed herewith is a Petition requesting a three-month extension of time for resetting the deadline for responding to the Office Action from December 6, 2005, to and including March 6, 2006.

In the Office Action, the Examiner considered claims 1-41. Claims 42-52 are withdrawn from consideration.

In the Office Action, the Examiner indicated that claims 7-14, 16-18, 20-29 and 34-38 contain allowable matter. Specifically, the Examiner objected to the above-listed claims as being dependent upon a rejected base claim, but indicated that the claims would be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims.

In the present Amendment, Applicants have amended claims 1, 16, 30 and 35-36. Support for the amendment of claim 1 is found in originally filed FIGS. 5-7 and paragraphs 62-64 of the specification. Claim 16 has been amended to incorporate the limitations of original claim 1 therein. Claim 30 has been amended to incorporate the limitations of original claim 34 therein, and claims 35 and 36 have been amended to depend from claim 30. Claims 34 and 42-52 have been canceled.

Paragraph 69 of the specification has been amended to note that application no. 09/271,688 has issued as U.S. Patent No. 6,429,112.

Enclosed herewith is a Submission of Formal Drawings to submit formal drawings for FIGS. 1-24.

In the Office Action, the Examiner rejected claims 1-2, 4-5, 15 and 19 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,924,171 to Buchwalter et al., which discloses methods of making microelectronic

interconnections. Referring to FIGS. 1A-1F thereof, Buchwalter discloses a semiconductor wafer 10 having contacts 12. The contact bearing face of the wafer 10 is covered with a polymeric material 14, and openings 16 are formed in the polymeric material (FIG. 1C). Referring to FIG. 1D, a conductive bump material 18 is then disposed within the openings 16 and a second polymeric material 20 is provided over the top of the conductive bump material 18 and the top surface of the first polymeric material 14. Referring to FIG. 1G, the assembly shown in FIG. 1F is then juxtaposed with an external substrate 24 having receiving pads 26. As shown in FIG. 1G, the second polymeric material layer 20 covers the conductive bump material 18 as the chip 10 is abutted against the receiving pads 26 of the external substrate 24. The conductive bump material 18 remains covered by the second polymeric layer 20 when the chip 10 is assembled with the external substrate 24. In the embodiment shown in FIGS. 2A-2D, Buchwalter teaches that the first polymeric material layer 14 covers the conductive bumps 18. The first polymeric material layer 14 is at least partially removed to expose a top section of each conductive bump 18. A layer of a second polymeric material 20 is then provided over the exposed top section of each bump 18. The structure shown in FIG. 2D, having the conductive bumps 18 covered by the second polymeric material layer 20, is abutted against an external substrate such as that shown in FIG. 1H.

Referring to FIGS. 5-6 thereof, the invention disclosed in the present application differs from Buchwalter, because the protrusions of conductive material 14 remain accessible above the second top surface 46 of molding material 35 when the conductive protrusions 14 are electrically interconnected with the microelectronic component 50 (FIG. 6). This is different than Buchwalter, which teaches that the conductive bump material 18 remains covered by a second

polymeric material layer as the chip 10 is abutted against a face surface of an external substrate 24. Applicants respectfully assert that claim 1 is unanticipated by Buchwalter because the cited reference neither discloses nor suggests a method of making a microelectronic assembly including "removing a portion of the material so that portions of the protrusions are accessible; and after the removing step and while the protrusions are accessible, assembling the microelectronic element with a microelectronic component." Claims 2-15 and 19-29 are unanticipated, *inter alia*, by virtue of their dependence from claim 1, which is unanticipated for the reasons set forth above.

As noted above, the Examiner indicated that claim 16 contained allowable matter, and would be allowed if amended to incorporate the limitations of the base claim and any intervening claims. In response, Applicants have amended claim 16 to incorporate the limitations of claim 1 therein. Thus, Applicants respectfully assert that claim 16 is unanticipated by Buchwalter and is otherwise allowable. Claims 17 and 18 are unanticipated, *inter alia*, by virtue of their dependence from claim 16.

The Examiner rejected claims 30-33 and 39-41 under 35 U.S.C. §103(a) as being unpatentable over Nye, III et al. In the Office Action, the Examiner indicated that claim 34 contained allowable matter. In response, Applicants have amended claim 30 to incorporate the limitations of claim 34 therein. In view of this amendment, Applicants respectfully assert that claim 30 is unobvious over Nye and is otherwise allowable. Claims 31-33 and 35-41 are unobvious, *inter alia*, by virtue of their dependence from claim 30, which is unobvious for the reasons set forth above.

The Examiner rejected claims 3, 6 and 33 under 35 U.S.C. §103(a) as being unpatentable over Buchwalter in view of

Nye, III. In response, Applicants assert that claims 3 and 6 are patentable, *inter alia*, by virtue of their dependence from claim 1 and claim 33 is patentable, *inter alia*, by virtue of its dependence from claim 30.


As it is believed that all of the rejections set forth in the Office Action have been fully met, favorable reconsideration and allowance are earnestly solicited.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he telephone Applicants' attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested Amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

Dated: March 3, 2006

Respectfully submitted,

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